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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,396	07/22/2003	Ashish Agarwal	5760-12100	6815

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EXAMINER

SORRELL, ERON J

ART UNIT PAPER NUMBER

2182

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,396

Applicant(s)

AGARWAL ET AL.

Examiner

Eron J. Sorrell

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-18 and 20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2,4-18 and 20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/29/06 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1,2,4-10,12-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Midgley et al. (U.S. Patent No. 6,625,623 hereinafter "Midgley") in view of Rubin et al. (U.S. Patent No. 5,680,573 hereinafter "Rubin").

Art Unit: 2182

4. Referring to system claim 1, method claim 9, and computer storage medium claim 17, Midgley teaches a computing system comprising:

an application configured to initiate write transactions (see lines 22-40 of column 16);

a first storage device configured to store data corresponding to said write transactions (see lines 22-40 of column 16); and

a replicator component (see lines 10-52 of column 19) configured to:

monitor said write transactions (see lines 10-52 of column 19); and

automatically modify system resources in response to I/O characteristics of said monitored write transactions (see lines 10-52 of column 19, note the I/O characteristics is being construed as the number of write transaction, Midgley teaches thousands can occur).

Midgley is silent on the system comprising a memory pool and the replicator being configured to allocate buffers from the memory pool for the write transactions and modifying the size of the memory pool in response to the I/O characteristics.

Art Unit: 2182

Rubin teaches, in an analogous system, the above limitations (see line 60 of column 8 to line 11 of column 9).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Midgley with the above teachings of Rubin. One of ordinary skill in the art would have been motivated to make such modification in order to more efficiently manage the memory in the system as suggested by Rubin (see paragraph bridging columns 2 and 3).

5. Referring to system claim 2, method claim 10, and storage medium claim 18, Midgley the replicator is further configured to record data indicative of said characteristics (see paragraph bridging columns 7 and 8).

6. Referring to system claim 4 and method claim 12, Midgley teaches the system further comprises a log volume, and wherein the replicator is further configured to store the write transactions in the log volume (see lines 4-37 of column 17, wherein Midgley discloses a "journal file").

Art Unit: 2182

7. Referring to system claim 5 and method claim 13, Midgley teaches said application, first storage device, and replicator are within a first node of said system (see figure 1, item 28, and lines 23-40 of column 16), and wherein said system includes a second node with a second storage device coupled to said first node (see figure 1, item 16 and lines 54-63 of column 16) wherein said replicator component is further configured to convey said write transactions to said second node (see lines 54-63 of column 16).

8. Referring to system claim 6, method claim 14, and storage medium claim 20, Midgley fails to teach the second node includes a pool of buffers, each of which is configured to store a write transaction received from the first node, and wherein said replicator component is further configured to modify a size of said pool of buffers in said second node in response to said characteristics, however Midgley does teach the use of buffers for transfer data in the write transaction (see line 25-52 of column 9).

Rubin teaches, in an analogous system, the above limitations (see paragraph bridging columns 8 and 9)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the

Art Unit: 2182

system of Midgley with the above teachings of Rubin. One of ordinary skill in the art would have been motivated to make such modification in order to more efficiently manage the memory in the system as suggested by Rubin (see paragraph bridging columns 2 and 3).

9. Referring to system claim 7 and method claim 15, Midgley teaches, the replicator is further configured to:

provide the recorded characteristics for display (see lines 25-65 of column 19);

provide guidelines to a user for modifying resources of said system (see lines 25-65 of column 19); and

modify said resources based upon user input (see lines 25-65 of column 19).

10. Referring to system claim 8 and method claim 16, Midgley teaches the replicator component is configured to access the recorded data responsive to detecting an event (see paragraph bridging columns 7 and 8, note the recorded data is accessed when the journal file is transmitted to the backup server).

Art Unit: 2182

Response to Arguments

11. Applicant's arguments filed 3/29/06 have been fully considered but they are not persuasive. The applicant argues:

1) the prior art fails to teach or suggest automatically modifying the system resources (see paragraph bridging pages 6 and 7); and

2) the prior art fails to teach or suggest providing the user with guidelines to modify the system resources (see 2nd full paragraph of page 8).

12. As per arguments 1 and 2, the Examiner disagrees. Midgley teaches at lines 43-52 of column 19, that the bandwidth control process can *"determine, either dynamically or historically, the available network resources for a given time,"* and that *"the determined resources may be provided by the user through the console process or automatically employed by the bandwidth control process for selecting network consumption limits (emphasis added)."* This citation clearly shows the resources can be automatically selected by the control program, or the user can use the historical usage statistics as a guideline for setting current or future usage limits. Also, regarding applicant's first argument, the courts have held that broadly providing an automatic or mechanical means to replace a manual

Art Unit: 2182

activity which accomplished the same result is not sufficient to distinguish over the prior art. See *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J. Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EJS
June 23, 2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER
6/29/06